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Congress of the United States
House of Representatives
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

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August 31, 2015

The Honorable Gina McCarthy
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Dear Administrator McCarthy:

On December 17, 2014, the U.S. Environmental Protection Agency (EPA) issued its proposed rule for ozone National Ambient Air Quality Standards (NAAQS). The proposed rule would set more stringent standards, lowering the primary standard from the current 75 parts per billion (ppb) to a range of 65 to 70 ppb. If enacted, this rule is likely to be the costliest rule EPA has ever proposed.[1]

We are concerned that EPA may not have properly analyzed the underlying scientific issues that have been raised since the official comment period for the rule has closed. These issues include serious concerns raised about background ozone and the reliance on a single study as the basis for setting the proposed standard. The American people deserve a thorough and complete analysis of this proposed rule.

The Committee is concerned about the impact of background ozone on the attainability of EPA's proposed ozone standard across the entire United States. Background ozone comes from both natural sources and foreign emission sources.[2] As EPA admits its proposed rule:

> [T]here is no question that, as the levels of alternative prospective standards are lowered, background will represent increasingly larger fractions of total O_3 levels and may subsequently complicate efforts to attain these standards.[3]

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[1] http://www.nam.org/Newsroom/Press-Releases/2015/02/NAM--Proposed-Ozone-Rule-Still-The-Most-Costly/
[2] http://www.asl-associates.com/natural.htm
[3] Federal Register, Vol. 79, No. 242 75383

In testimony before the Committee and in response to follow-up questions from Committee Members, Dr. Allen Lefohn, an expert on ozone and a past Executive Editor of the journal *Atmospheric Environment*, indicated that the large amount of emission reductions required to meet EPA's proposed lower ozone standard highlights the importance of background ozone levels throughout the U.S.[4] Dr. Lefohn also noted that ozone formed from background sources across the U.S. predominates during the spring months when anthropogenic sources have a much smaller impact.[5] We are concerned about modeling results that indicate that exceedances of the proposed ozone standard will occur during the springtime, even when emissions are dramatically reduced across the U.S.[6] EPA's recent proposal[7] to extend the ozone-monitoring period to include the month of March will identify violations of the proposed standard that are associated with uncontrollable factors, which is especially concerning.[8] Furthermore, the locations affected by the aforementioned monitoring season change can appear anywhere across the U.S., creating compliance issues for the entire country, not exclusively limited to the western U.S.[9]

In addition to concerns related to background ozone, the Committee notes that EPA's proposed rule places the greatest weight on controlled human exposure studies, citing significant uncertainties with epidemiologic studies:

> [T]he effects reported in controlled human exposure studies are due solely to O_3 exposures, and interpretation of study results is not complicated by the presence of co-occurring pollutants or pollutant mixtures (as is the case in epidemiologic studies). Therefore, she places the most weight on information from these controlled human exposure studies.[10]

Of these human exposure studies, however, it appears that only *one* controlled human exposure study, published in 2009 by Schelegle et al., shows effects that may be considered adverse at ozone concentrations below the current standard.[11] The Schelegle study found small, reversible impacts at ozone concentrations roughly equivalent to 72 ppb.[12] EPA's proposed rule notes that controlled human exposure studies at lower ozone concentrations (60 and 63 ppb) "did not show statistically significant increases in respiratory symptoms compared to filtered air controls."[13]

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[4] http://docs.house.gov/meetings/SY/SY00/20150317/103159/HHRG-114-SY00-Wstate-LefohnA-20150317.pdf
[5] H. Comm. on Science, Space and Technology, *Reality Check: The Impact and Achievability of EPA's Proposed Ozone Standards*, 114th Congress (Mar. 17, 2015), Questions for the Record, Dr. Allen Lefohn
[6] Ibid
[7] http://www.epa.gov/ttn/naaqs/standards/ozone/data/Rice-2014-O3MonitoringSeasonAnal-EPA-HQ-OAR-2008-0699-0383.pdf
[8] H. Comm. on Science, Space and Technology, *Reality Check: The Impact and Achievability of EPA's Proposed Ozone Standards*, 114th Congress (Mar. 17, 2015), Questions for the Record, Dr. Allen Lefohn
[9] ibid
[10] 75288, Federal Register, Vol. 79, No. 242
[11] Schelegle et al., 6.6-Hour Inhalation of Ozone Concentrations from 60 to 87 Parts per Billion in Healthy Humans, Am J Respir Crit Care Med. 2009 Aug 1;180(3):265-72.
[12] Ibid
[13] 75304, Federal Register, Vol. 79, No. 242

Based on this evidence, the proposal states that the Administrator concludes that the controlled human exposure studies "strongly support setting the level of a revised [ozone] standard no higher than 70 ppb."[14]

However, the 2009 Schelegle et al. study contains serious deficiencies that were not discussed in the proposed rule. For example, this study does not replicate key results from previous peer-reviewed studies, and another peer-reviewed study[15] has raised questions about the lack of consistency between Schelegle's results and the two studies by Adams et al (2003, 2006).[16]

> We noted that there was a relative lack of coherence of the 70 and 80 ppb experiments reported by Schelegle et al. (2009) compared with the other 4 studies, as well as an inconsistency of response by subjects.[17]

The Committee is concerned with such a heavy reliance on one potentially flawed study as basis for EPA's proposed rule, and believes that these concerns warrant further deliberation before EPA finalizes the rule.

The aforementioned concerns raise many questions about the necessity and validity of enacting a new, more stringent ozone NAAQS rule. In order to assist the Committee with its oversight, please provide the following documents, in electronic format:

1. All documents and communications referring or relating to EPA's analysis of the influence of background ozone in the springtime on the attainment of a lower ozone standard throughout the entire United States.

2. All documents and communications referring or relating to EPA's analysis of the relationship between background ozone and the anthropogenic emissions reductions that will be required during both the summer and the spring to attain the proposed lower standards.

3. All documents and communications referring or relating to any plan or strategy to address the influence of background ozone on the attainment of a lower ozone standard.

4. All documents and communications referring or relating to EPA's analysis of estimates for mortality and morbidity health risk that were influenced by background ozone and also by anthropogenic sources, as ozone emissions are reduced.

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[14] 75304, Federal Register, Vol. 79, No. 242

[15] Lefohn AS, Hazucha MJ, Shadwick D, Adams WC., "An alternative form and level of the human health ozone standard", Inhal Toxicol. 2010 Oct;22(12):999-1011

[16] Adams W.C. Comparison of chamber 6.6-h exposures to 0.04-0.08 ppm ozone via square-wave and triangular profiles on pulmonary responses. Inhal Toxicol 2006;18:127-136
Adams W.C. Comparison of chamber and face-mask 6.6-hour exposure to 0.08 ppm ozone via square-wave and triangular profiles on pulmonary responses. Inhal Toxicol 2003;15:265-281

[17] Lefohn AS, Hazucha MJ, Shadwick D, Adams WC., "An alternative form and level of the human health ozone standard", Inhal Toxicol. 2010 Oct;22(12):999-1011

5. All documents and communications referring or relating to EPA's analysis of the influence of background ozone and anthropogenic sources on lung function risk estimates.

6. All documents and communications referring or related to the 2009 Schelegle et al. study.

7. All documents and communications between EPA and the Office of Management and Budget (OMB) regarding background ozone issues and the 2009 Schelegle et al study.

8. All documents and communications between EPA and outside groups referring or related to the 2009 Schelegle et al study.

Because the rule must be finalized by October 1, 2015, please provide responses as soon as possible, but no later than 5:00 p.m. on Monday, September 14, 2015. When producing documents to the Committee, please deliver production sets to the following locations:

- Majority Staff of the House Science Committee in Room 2321 of the Rayburn House Office Building

- Minority Staff of the House Science Committee in Room 394 of the Ford House Office Building

If you have any questions about this request, please contact Richard Yamada or Joe Brazauskas of the Science, Space, and Technology Committee staff at 202-225-6371. Thank you for your attention to this matter.

Sincerely,

Rep. Lamar Smith
Chairman

Rep. Frank Lucas
Vice Chairman

Rep. F James Sensenbrenner Jr.
Chairman Emeritus

Rep. Dana Rohrabacher
Member of Congress

Rep. Randy Neugebauer
Member of Congress

Rep. Michael McCaul
Member of Congress

Rep. Mo Brooks
Member of Congress

Rep. Randy Hultgren
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Rep. Jim Bridenstine
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Subcommittee on Environment

Rep. Randy Weber
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Subcommittee on Energy

Rep. Bill Johnson
Member of Congress

Rep. John Moolenaar
Member of Congress

Rep. Steve Knight
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Rep. Brian Babin
Chairman
Subcommittee on Space

Rep. Bruce Westerman
Member of Congress

Rep. Gary Palmer
Member of Congress

Rep. Barry Loudermilk
Chairman
Subcommittee on Oversight

Rep. Ralph Lee Abraham
Member of Congress

cc: The Honorable Eddie Bernice Johnson, Ranking Minority Member, House Committee on Science, Space and Technology